UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/624,123	07/24/2000	Roy Harold Mauger	476-1933	6345

23644 7590 12/29/2004

BARNES & THORNBURG
P.O. BOX 2786
CHICAGO, IL 60690-2786

EXAMINER	
TRAN, PHUC H	

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 12/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/624,123	MAUGER, ROY HAROLD	
	Examiner	Art Unit	
	PHUC H TRAN	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, 10-18 and 21-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Casey (U.S. Patent No. 6493349 B1).

- With respect to claims 1, 10, 17, and 22 Casey discloses a communications multi-service network (private networks through one or more shared networks col. 2 line 67) comprising:

a plurality of nodes (VPN routers see col. 3, lines 2-3) interconnected via a plurality of quality of service capable tunnels (tunnel 1 and tunnel 2 in Fig. 2) and incorporating a frame-mode MPLS architecture (a MPLS based IP VPN area in the backbone col. 3 lines 36-37) whereby IP services are run directly over a frame-based core part of the multi-service network (using forms of IP VPN technology such as IP over Frame Relay col. 3 lines 37-38) and legacy services are run over ATM adaptations and emulated ATM services on the core part of the network (LANE col. 3 lines 39-40, thus ATM services over a base network that is ATM col.7 lines 16), the multi-service network further comprising one or more virtual switches for switching data traffic (virtual private network areas, each area including VPN routers see par. bridging cols. 2-3).

- With respect to claims 2, and 11, Casey discloses a frame-mode switching communications multi-service network (the shared network col. 6 line 15-19 fig. 3) comprising:

a plurality of core nodes establishing a multi-service transport network (other nodes col. 6 line 20-25), and a plurality of service nodes each coupled to a said core node whereby access to the transport is provided (VBRS col. 6 line 20-29 Fig. 2), and having a network management system (ISP) arranged to define and manage one or more virtual public/private networks (providers serve as the administering unit for VPNS col. 6 line 44-56) within said communications network, the method comprising configuring groups of said core nodes (VRs) as abstract nodes (VPNs) within which any available path may selected to achieve a requested connection (each VR dedicated to a particular BPN has enough information to establish tunnels to all other VRs of that VPN col. 6 line 57-64), and wherein end to end label switched paths are established via the management system by specifying a series of abstract nodes (services are provided upon the VPNID and the VBR col. 7 line 59-67), the method further comprising switching data traffic over one or more virtual switches (VRs are able to forward all enterprise traffic between all sites in the VPN col. 8 line 12-13).

- With respect to claims 3 and 12, Casey discloses, each path is specified by identifying first and second real nodes and one or more abstract nodes there between (communication path which traverse VPN tunnels consisting of VBR borders connected to BNN and other nodes which operate as part of the base network col. 6 line 20-25).

- With respect to claims 4 and 13, Casey discloses, a virtual public/private network is defined with multiple stages of first level constraint-based routed label switched paths (Quality of service allocated to the path formed in MPLS in different VPN areas col. 3 line 62).

- With respect to claims 5 and 14, Casey discloses, each abstract node is defined by an IP address prefix, and all core nodes, which include that prefix in their IP address, are part of that abstract node (routing exchanges relate only to the IP address space of the private network, the VR within the VBR forwarding control process is performed in relation to that IP address col. 4 line 29-37).

- With respect to claims 6, and 15, Casey discloses, a super-ordinate management function arranged to control creation, modification and deletion of virtual switches (group of network providers come together to offer a combined IP VPN services thus providing modifications and introductions to the virtual switch col. 3 lines 44-47).

- With respect to claims 7, and 16, Casey discloses, super-ordinate manager is adapted for defining virtual private/public networks (VPN) and for placing traffic trunks to realize those VPNS (the MPLS backbone can partition the shared network based upon the IP VPN implementation choices col. 3 lines 31-35).

- With respect to claim 18, Casey discloses, a plurality of core nodes establishing a transport network (other nodes col. 6 line 20-25), service nodes each coupled to a said core node to provide access to the transport network (VBRS col. 6 line 20-29 fig. 2), and a network management system (ISP) arranged to define and manage one or more virtual public/private networks within said communications network (providers serve as the administering unit for VPNS col. 6 line 44-56), wherein groups of said core nodes (VRs) are configured as abstract nodes (VPNS) within which abstract nodes any available path may be selected to achieve a requested connection (each VR dedicated to a particular BPN has enough information to establish tunnels to all other VRs of that VPN col. 6 line 57-64), and wherein end to end label

switched paths are established via the management system by specifying a series of abstract nodes (services are provided upon the VPNID and the VBR col. 7 line 59-67), wherein a said virtual public/private network (VPN) is defined with multiple stages of first level constraint-based routed label switched paths (Quality of service allocated to the path formed in MPLS in different VPN areas col. 3 line 62); wherein each said abstract node is defined by an IP address prefix, and all core nodes which include that prefix in their IP address are pad of that abstract node (routing exchanges relate only to the IP address space of the private network, the VR within the VBR forwarding control process is performed in relation to that IP address col. 4 line 29-37); the network incorporating a super-ordinate management function arranged to control creation, modification and deletion of virtual switches (group of network providers come together to over a combined IP VPN services thus providing modifications and introductions to the virtual switches col. 3 lines 44-47), and wherein said super-ordinate manager is adapted for defining virtual private/public networks (VPN) and for placing traffic trunks to realize those VPNS (the MPLS backbone can partition the shared network based upon the IP VPN implementation choices col. 3 lines 31-35).

- With respect to claim 21, Casey discloses, a plurality of core nodes establishing a transport network (other nodes col. 6 line 20-25), and service nodes each coupled to a said core node whereby access to the transport is provided (VBRS col. 6 line 20-29 fig. 2), and having a network management system arranged to define and manage one or more virtual public/private networks within said communications network (providers serve as the administering unit for VPNS col. 6 line 44-56), the method comprising configuring groups of said core nodes (VRs) as abstract nodes (VPNs) within which any available path may selected to achieve a requested

connection (each VR dedicated to a particular BPN has enough information to establish tunnels to all other VRs of that VPN col. 6 line 57-64), and wherein end to end label switched paths are established via the management system by specifying a series of abstract nodes (services are provided upon the VPNID and the VBR col. 7 line 59-67); wherein each said path is specified by identifying first and second real nodes and one or more abstract nodes there between (communication path which traverse VPN tunnels consisting of VBR borders connected to BNN and other nodes, which operate as pad of the base network col. 6 line 20-25), wherein a said virtual public/private network (VPN) is defined with multiple stages of first level constraint-based routed label switched paths (Quality of service allocated to the path formed in MPLS in different VPN areas col. 3 line 62); wherein each said abstract node is defined by an IP address prefix, and all core nodes, which include that prefix in their IP address are part of that abstract node (routing exchanges relate only to the IP address space of the private network, the VR within the VBR forwarding control process is performed in relation to that IP address col. 4 line 29-37), the method including creation, modification and deletion of virtual switches via a super-ordinate management function switches (group of network providers come together to offer a combined IP VPN services thus providing modifications and introductions to the virtual switches col. 3 Lines 44-4), and wherein said super-ordinate manager is adapted for defining virtual private/public networks (VPN) and for placing traffic trunks to realize those VPNS (the MPLS backbone can partition the shared network based upon the IP VPN implementation choices col. 3 Lines 31-35).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 8, 9, 19 and 20 are rejected under 35 U.S.C. 103(a) as being obvious over Casey (U.S. 6,493,349) in view of Hughes et al. (U.S. 6,434,612).

- With respect to claims 8 and 19, Casey discloses all the limitations of claim 1 through 7. Casey does not disclose a subordinate management function arranged to provide virtual switch management. Hughes et al. (U.S. 6,434,612) discloses a controller functioning to control a virtual switch col.6 line 52-53.The controllers manages connection segment synchronization with the corresponding switches (col. 9 line 53). It would have obvious to one of ordinary skill in the art at the time the invention was made to modify Casey as suggested by Hughes et al. in order to administer the functions and services of the switches.

- With respect to claims 9 and 20, Casey discloses, a sub network manager is responsible for constructing an abstract node information model representation of the network, which it passes to a super-ordinate manager (consortium must configure VBRS to realize the desired VPN col. 5 line 32-35).

Response to Arguments

4. Applicant's arguments filed 8/03/04 have been fully considered but they are not persuasive.

- In response to Applicant's argument that Casey cannot be a multi-service network (in page 9). Examiner respectfully disagrees with Applicant. Fig. 3 shows Casey's network is multi-service network to a personal of ordinary skill in the art at the time of the invention was made.

- In response to Applicant's argument that Casey is silent on the issue of whether the tunnels are quality of service capable tunnels (page 9). Examiner respectfully disagrees with Applicant. Casey teaches the QoS my also vary in different VPN (col. 3, line 62) and each VPN area a different tunneling (col. 7, lines 13).

- Applicant also argues that Casey does not teach the feature of handling services traffic differently to IP services traffic on the same network (page 9), which is not teaching in the claim invention.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUC H TRAN whose telephone number is (571) 272-3172. The examiner can normally be reached on M-F (8-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RAO SEEMA can be reached on (571)272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuc Tran
Assistant Examiner
Art Unit 2664

P.t
12/20/04